UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,977	02/25/2004	Tsuyahiko Shimada	826.1931	8981

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EXAMINER
PATEL, MANGLESH M

ART UNIT	PAPER NUMBER
2178	

DATE MAILED: 04/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/784,977	SHIMADA, TSUYAHIKO
	Examiner	Art Unit	
	Manglesh M. Patel	2178	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>25 February 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-10</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-10</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>25 February 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☒ All b)☐ Some * c)☐ None of:

   1.☒ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>May 25, 2004</u>.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1.   This **Non-Final** action is responsive to communications: IDS filed on May 25, 2004 to

the application filed on Feb 25, 2004.

2.   Claims 1-10 are pending. Claims 1 and 5-10 are independent claims.

Information Disclosure Statement

3.   The information disclosure statement (IDS) submitted on May 25, 2004 has been entered,

and considered by the examiner.

Priority

4.   Acknowledgment is made of applicant's claim for foreign priority under 35

U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 2006-155278 JP,

filed on 05/30/2003.

Drawings

5.   The Drawings filed on Feb 25, 2004 have been approved.

Claim Rejections - 35 USC § 112

6.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
subject matter which the applicant regards as his invention.

7.　　Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim contains the word "can" rendering the claim indefinite.

Claim Rejections - 35 USC § 103

8.　　The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter.sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9.　　Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kodaira (U.S. 6,868,183, filed on Mar 17, 2000) in view of Schneider (U.S. 5,229,589, filed on Nov 21, 1991).

Regarding Independent claims 1, 5, 7 and 9, Kodaira discloses a document processing apparatus which displays a document image using image data of a document having one or more entry columns, comprising: An image data obtaining unit obtaining image data of a document (column 4, lines 40-67, wherein the image input device includes an image scanner); An area discrimination unit discriminating an area of a document image indicated by the image data obtained by said image data obtaining unit, and discriminating at least between two types of areas, that is, a useful information area having useful information for document processing and an useless information area

having no useful information area (column 4, lines 58-67 & column 5, lines 10-35,

wherein a region discriminating unit is used to discriminate a pixel having character as a

region. The discriminating unit also determines feature quantities such as presence or

absence of key regions, thereby discriminating between a useful and useless area);

Kodaira fails to explicitly teach the use of a ratio for increasing the area of the useful

information. Schneider discloses a data processing unit increasing a ratio of the useful

information area to the entire area by processing at least one of a first partial image data

which is image data of a portion for display of the useful information area and a second

partial image data which is image data of a portion for display of the useless information

area based on the discrimination by said area discrimination unit (column 7, lines 50-67

& column 8, lines 1-10, wherein a ratio is used to determine the useful information area

by comparing the densities of the marks in the adjacent area which include the useless

and useful information areas); A display control unit displaying a document image on a

display device using the image data obtained by said data processing unit processing at

least one of the first and second partial image data (column 7, lines 50-67 & column 8,

lines 1-10, wherein the mark is displayed on the monitor thereby including a display

control unit for displaying the document image). Kodaira and Schneider are analogous art

because they are from the same field of endeavor of image processing. Kodaira describes

the use of the discriminating units which separates the image into regions and measures

the density and other attributes of the image, including size and shape. Schneider

discloses the use of a ratio for determining the different densities of the image in the

region which include useless and useful areas. At the time of the invention it would have

been obvious to a person of ordinary skill in the art to include the use of a ratio to

determine the image area. The motivation for doing so would have been to distinguish

between the image region from the non-image region by using a ratio to measure the size

and shape of the image in the area thereby saving memory. Therefore it would have been

obvious to combine the teachings of Schneider and Kodaira for the benefits of allowing a

document processing apparatus to display a document image using image data of a

document having one or more entry columns including a ratio for determining the image

area thereby saving memory by providing regions that include only the image

information.

Regarding Dependent claims 2, with dependency of claim 1, Kodaira discloses wherein

said area discrimination unit considers at least one direction in counting a number of

pixels assumed to be used in displaying information about a document image represented

by the image data, and discriminates the useful information area from the useless

information area based on a counting result (abstract, column 2, lines 5-67, wherein

counting is used to distinguish between the useless and useful area by using the

discrimination unit).

Regarding Dependent claim 3, with dependency of claim 2, Kodaira discloses wherein

when said area discrimination unit discriminates the useful information area from the

useless information area based on whether or not the number of pixels counted by

considering one direction is equal to or smaller than a predetermined value, said data

processing unit increases a ratio of the useful information area to the entire area by

performing on at least the second partial image data a process of thinning lines having the

number of pixels equal to or smaller than a predetermined value in the lines in the one

direction (column 14, lines 40-67, wherein a predetermined rules are part of the

discrimination unit, thereby including predetermined values for the discrimination of the

useful to useless regions).

Regarding Dependent claim 4, with dependency of claim 1, Kodaira fails to explicitly

teach the use of a ratio for increasing the area of the useful information. Schneider

discloses wherein said data processing unit performs a process on at least one of the first

and second partial image data so that a ratio of the useful information area to the entire

area can be increased by using different display magnifications of the useful information

area and the useless information area (column 7, lines 50-67 & column 8, lines 1-10).

Kodaira and Schneider are analogous art because they are from the same field of

endeavor of image processing. Kodaira describes the use of the discriminating units

which separates the image into regions and measures the density and other attributes of

the image, including size and shape. Schneider discloses the use of a ratio for determining

the different densities of the image in the region which include useless and useful areas.

At the time of the invention it would have been obvious to a person of ordinary skill in

the art to include the use of a ratio to determine the image area. The motivation for doing

so would have been to distinguish between the image region from the non-image region

by using a ratio to measure the size and shape of the image in the area thereby saving

memory. Therefore it would have been obvious to combine the teachings of Schneider and Kodaira for the benefits of allowing a document processing apparatus to display a document image using image data of a document having one or more entry columns including a ratio for determining the image area thereby saving memory by providing regions that include only the image information.

Regarding Independent claims 6, 8 and 10, Kodaira discloses a document processing apparatus which processes a document having one or more entry columns, comprising: image data obtaining unit obtaining image data of a document (column 4, lines 40-67, wherein the image input device includes an image scanner); area discrimination unit discriminating an area of a document image indicated by the image data obtained by said image data obtaining means, and discriminating at least between two types of areas, that is, a useful information area having useful information for document processing and an useless information area having no useful information area (column 4, lines 58-67 & column 5, lines 10-35, wherein a region discriminating unit is used to discriminate a pixel having character as a region. The discriminating unit also determines feature quantities such as presence or absence of key regions, thereby discriminating between a useful and useless area); Document recognition unit recognizing the entry column entered on the document image displayed by said display control means (column 13, lines 55-67 & column 14, lines 1-39, wherein a recognition unit is used to determine the document image in the column); Correction unit correcting presence/absence of an entry in the entry column recognized by said document recognition means at an instruction of a user

(column 10, lines 46-67 & column 11, lines 1-25, wherein a correction process is used to correct a presence or absence of an image in a column). Kodaira fails to explicitly teach the use of a ratio for increasing the area of the useful information. Schneider discloses data processing unit increasing a ratio of the useful information area to the entire area by processing at least one of a first partial image data which is image data of a portion for display of the useful information area and a second partial image data which is image data of a portion for display of the useless information area based on the discrimination by said area discrimination means (column 7, lines 50-67 & column 8, lines 1-10, wherein a ratio is used to determine the useful information area by comparing the densities of the marks in the adjacent area which include the useless and useful information areas); Display control unit displaying a document image on a display device using the image data obtained by said data processing means processing at least one of the first and second partial image data (column 7, lines 50-67 & column 8, lines 1-10, wherein the mark is displayed on the monitor thereby including a display control unit for displaying the document image); Kodaira and Schneider are analogous art because they are from the same field of endeavor of image processing. Kodaira describes the use of the discriminating units which separates the image into regions and measures the density and other attributes of the image, including size and shape. Schneider discloses the use of a ratio for determining the different densities of the image in the region which include useless and useful areas. At the time of the invention it would have been obvious to a person of ordinary skill in the art to include the use of a ratio to determine the image area. The motivation for doing so would have been to distinguish between the image region

from the non-image region by using a ratio to measure the size and shape of the image in the area thereby saving memory. Therefore it would have been obvious to combine the teachings of Schneider and Kodaira for the benefits of allowing a document processing apparatus to display a document image using image data of a document having one or more entry columns including a ratio for determining the image area thereby saving memory by providing regions that include only the image information.

It is noted that any citation [[s]] to specific, pages, columns, lines, or figures in the prior art references and any interpretation of the references should not be considered to be limiting in any way. A reference is relevant for all it contains and may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. [[See, MPEP 2123]]

Conclusion

Other Prior Art Cited

10.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Guo et al. (U.S. 6,597,808) discloses "User Drawn Circled Region Extraction From Scanned Documents"

- Deaett et al. (U.S. 6,072,889) discloses "Method And System For Imaging Target Detection"

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manglesh M. Patel whose telephone number is (571) 272-5937. The examiner can normally be reached on M, W 6 am-3 pm T, TH 6 am-2pm, Fr 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen S. Hong can be reached on (571) 272-4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Manglesh M. Patel
Patent Examiner
March 30, 2006

CESAR PAULA
PRIMARY EXAMINER